

AMENDMENTS TO THE CLAIMS

1. (Canceled)

2. (Currently amended) ~~The A~~ humidity control device ~~of claim 1, comprising:~~

an adsorptive unit having a humidity control passageway whose surface is provided with an adsorbent and which is capable of adsorbing moisture from a first air stream and of releasing moisture to a second air stream; and

an auxiliary passageway through which air flows to cool the humidity control passageway when adsorbing moisture and heat the humidity control passageway when releasing moisture, the humidity control device supplying to an indoor space an air stream after the adsorptive unit controls humidity of the air stream, wherein,

during regeneration of the adsorptive element (81, 82), all of a second air stream prior to its passage through the humidity control passageway (85) flows, as a heating fluid, into the auxiliary passageway (86); the auxiliary passageway is configured such that all of the second air stream prior to its passage through the humidity control passageway flows into the auxiliary passageway as a heating fluid when the adsorptive unit is regenerated by releasing moisture from the humidity control passageway.

3. (Currently amended) ~~The A~~ humidity control device ~~of claim 1, comprising:~~

an adsorptive unit having a humidity control passageway whose surface is provided with an adsorbent and which is capable of adsorbing moisture from a first air stream and of releasing moisture to a second air stream; and

an auxiliary passageway through which air flows to cool the humidity control passageway when adsorbing moisture and heat the humidity control passageway when releasing moisture, the humidity control device supplying to an indoor space an air stream after the adsorptive unit controls humidity of the air stream, wherein,

during regeneration of the adsorptive element (81, 82), a part of a second air stream prior to its passage through the humidity control passageway (85) flows, as a heating fluid, into the auxiliary passageway (86), the auxiliary passageway is configured such that a part of the second air stream prior to its passage through the humidity control passageway flows into the auxiliary passageway as a heating fluid when the adsorptive unit is regenerated by releasing moisture from the humidity control passageway, joins the rest of the second air stream which does not flow into the auxiliary passageway, and passes through the humidity control passageway (85).

4. (Currently amended) The humidity control device of claim 2, wherein said humidity control device includes a regeneration heater ~~(72)~~ which heats ~~a the~~ second air stream prior to its entrance into the humidity control passageway ~~(85)~~ and the auxiliary passageway ~~(86)~~.

5. (Currently amended) The humidity control device of claim 4, wherein said humidity control device includes a refrigerant circuit ~~(70)~~ through which a refrigerant is circulated to perform a refrigeration cycle, and wherein the regeneration heater ~~(72)~~ is ~~formed by~~ a heating-heat exchanger of the refrigerant circuit ~~(70)~~.

6. (Currently amended) The humidity control device of claim 2, wherein said humidity control device includes a regeneration heater ~~(72)~~ which heats ~~a the~~ second air stream prior to its entrance into the humidity control passageway ~~(85)~~ and the auxiliary passageway ~~(86)~~, and an

auxiliary heater ~~(78, 79)~~ which heats ~~a~~the second air stream after its passage through the auxiliary passageway ~~(86)~~ before the second air stream flows into the humidity control passageway ~~(85)~~.

7. (Currently amended) The humidity control device of claim 6, wherein said humidity control device includes a refrigerant circuit ~~(70)~~ through which a refrigerant is circulated to perform a refrigeration cycle, and wherein the regeneration heater ~~(72)~~ and the auxiliary heater ~~(78, 79)~~ are ~~formed by~~ heating-heat exchangers of the refrigerant circuit ~~(70)~~.

8. (Currently amended) The humidity control device of claim 2, wherein said adsorptive unit ~~humidity control device~~ includes a first adsorptive element ~~(81)~~ and a second adsorptive element ~~(82)~~, and said humidity control device is configured so as to perform a batch running operation which alternately switches between (a) a first operation in which moisture in ~~a~~the first air stream is adsorbed in the first adsorptive element ~~(81)~~ while moisture is released to ~~a~~the second air stream in the second adsorptive element ~~(82)~~ and (b) a second operation in which moisture in ~~a~~the first air stream is adsorbed in the second adsorptive element ~~(82)~~ while moisture is released to ~~a~~the second air stream in the first adsorptive element ~~(81)~~, and

wherein said humidity control device is configured so as to be capable of performing (i) a cooling/adsorption operating mode in which a cooling fluid flows through the auxiliary passageway ~~(86)~~ of the first adsorptive element ~~(81)~~ or the second adsorptive element ~~(82)~~ whichever adsorbs moisture in ~~a~~the first air stream and (ii) a heating/regeneration operating mode in which a heating fluid flows through the auxiliary passageway ~~(86)~~ of the first adsorptive

element ~~(81)~~ or the second adsorptive element ~~(82)~~ whichever releases moisture to ~~a the~~ second air stream.

9. (Currently amended) The humidity control device of claim 8, wherein said humidity control device is configured so as to simultaneously perform (i) a cooling/adsorption operating mode in which a cooling fluid flows through the auxiliary passageway ~~(86)~~ of the first adsorptive element ~~(81)~~ or the second adsorptive element ~~(82)~~ whichever adsorbs moisture in ~~a the~~ first air stream and (ii) a heating/regeneration operating mode in which a heating fluid flows through the auxiliary passageway ~~(86)~~ of the first adsorptive element ~~(81)~~ or the second adsorptive element ~~(82)~~ whichever releases moisture to ~~a the~~ second air stream.

10. (Currently amended) The humidity control device of claim 8, wherein said humidity control device is configured so as to be capable of selectively switching between (i) a cooling/adsorption operating mode in which a cooling fluid flows through the auxiliary passageway ~~(86)~~ of the first adsorptive element ~~(81)~~ or the second adsorptive element ~~(82)~~ whichever adsorbs moisture in ~~a the~~ first air stream and (ii) a heating/regeneration operating mode in which a heating fluid flows through the auxiliary passageway ~~(86)~~ of the first adsorptive element ~~(81)~~ or the second adsorptive element ~~(82)~~ whichever releases moisture to ~~a the~~ second air stream.

11. (Currently amended) The humidity control device of claim 8, wherein said humidity control device includes a regeneration heater ~~(72)~~ which heats ~~a the~~ second air stream prior to its entrance into the humidity control passageway ~~(85)~~ and the auxiliary passageway ~~(86)~~ of one of the first adsorptive element and second adsorptive element, adsorptive elements ~~(81, 82)~~, and a

cooler ~~(79, 78)~~ which cools ~~a cooling fluid prior to its entrance into the humidity control passageway (85) the first air stream after passing through the humidity control passageway of the other of the first adsorptive element and second adsorptive element~~ ~~adsorptive elements (81, 82).~~

12. (Currently amended) The humidity control device of claim 11, wherein said humidity control device includes a refrigerant circuit ~~(70)~~ through which a refrigerant is circulated to perform a refrigeration cycle, and wherein the regeneration heater ~~(72)~~ is formed by a heating-heat exchanger of the refrigerant circuit ~~(70)~~ and the cooler ~~(79, 78)~~ is formed by a cooling-heat exchanger of the refrigerant circuit ~~(70)~~.

13. (Currently amended) The humidity control device of claim 8, wherein said humidity control device includes: a regeneration heater ~~(72)~~ which heats ~~a~~ the second air stream prior to its entrance into the humidity control passageway ~~(85)~~ and the auxiliary passageway ~~(86)~~ of one of the first adsorptive element and second adsorptive element ~~adsorptive elements (81, 82)~~; an auxiliary heater ~~(78, 79)~~ which heats a second air stream after its passage through the auxiliary passageway ~~(86)~~ before the second air stream flows into the humidity control passageway ~~(85)~~; and a cooler ~~(79, 78)~~ which cools ~~a cooling fluid prior to its entrance into the humidity control passageway (85) the first air stream after passing through the humidity control passageway of the other of the first adsorptive element and second adsorptive element~~ ~~adsorptive elements (81, 82).~~

14. (Currently amended) The humidity control device of claim 13, wherein said humidity control device includes a refrigerant circuit ~~(70)~~ through which a refrigerant is circulated to perform a refrigeration cycle, and wherein the regeneration heater ~~(72)~~ and the auxiliary heater

~~(78, 79)~~ are formed by heating-heat exchangers of the refrigerant circuit ~~(70)~~ and the cooler ~~(79, 78)~~ is formed by a cooling-heat exchanger of the refrigerant circuit ~~(70)~~.

15. (Currently amended) The humidity control device of claim 12, wherein the direction of refrigerant circulation in the refrigerant circuit ~~(70)~~ is reversible, and wherein the direction of refrigerant circulation in the refrigerant circuit ~~(70)~~ is changed in response to switching between adsorptive and regenerative sides in the batch running operation.

16. (Currently amended) The humidity control device of claim 14, wherein the direction of refrigerant circulation in the refrigerant circuit ~~(70)~~ is reversible, and wherein the direction of refrigerant circulation in the refrigerant circuit ~~(70)~~ is changed in response to switching between adsorptive and regenerative sides in the batch running operation.

17. (Currently amended) The humidity control device of claim 3, wherein said humidity control device includes a regeneration heater ~~(72)~~ which heats the part of the a-second air stream prior to its entrance into the humidity control passageway ~~(85)~~ and the auxiliary passageway ~~(86)~~.

18. (Currently amended) The humidity control device of claim 3, wherein said humidity control device includes a regeneration heater ~~(72)~~ which heats the part of the a-second air stream prior to its entrance into the humidity control passageway ~~(85)~~ and the auxiliary passageway ~~(86)~~, and an auxiliary heater ~~(78, 79)~~ which heats the part of the a-second air stream after its passage through the auxiliary passageway ~~(86)~~ before the second air stream flows into the humidity control passageway ~~(85)~~.

19. (Currently amended) The humidity control device of claim 3,

wherein said adsorptive unit ~~humidity control device~~ includes a first adsorptive element ~~(81)~~ and a second adsorptive element ~~(82)~~, and said humidity control device is configured so as to perform a batch running operation which alternately switches between (a) a first operation in which moisture in ~~a~~the first air stream is adsorbed in the first adsorptive element ~~(81)~~ while moisture is released to ~~a~~the second air stream in the second adsorptive element ~~(82)~~ and (b) a second operation in which moisture in ~~a~~the first air stream is adsorbed in the second adsorptive element ~~(82)~~ while moisture is released to ~~a~~the second air stream in the first adsorptive element ~~(81)~~, and

wherein said humidity control device is configured so as to be capable of performing (i) a cooling/adsorption operating mode in which a cooling fluid flows through the auxiliary passageway ~~(86)~~ of the first adsorptive element ~~(81)~~ or the second adsorptive element ~~(82)~~ whichever adsorbs moisture in ~~a~~the first air stream and (ii) a heating/regeneration operating mode in which a heating fluid flows through the auxiliary passageway ~~(86)~~ of the first adsorptive element ~~(81)~~ or the second adsorptive element ~~(82)~~ whichever releases moisture to ~~a~~the second air stream.